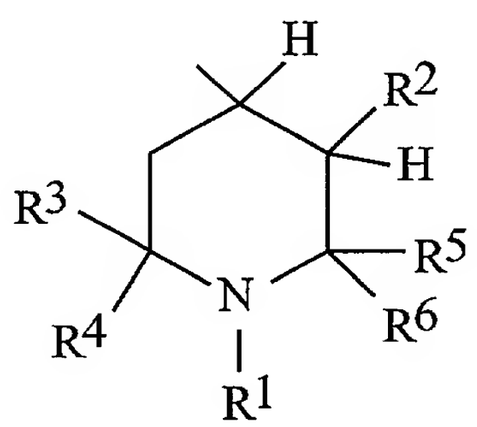
CLAIMS

What is claimed is:

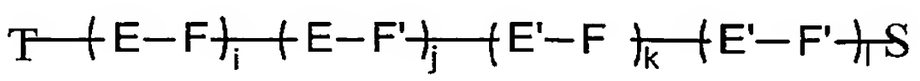
1. A polymeric article comprising at least one polymeric material and a sufficient amount of at least one compound of formula I, II, or III to inhibit at least one of photo- or thermal degradation, wherein the compound of formula (I) is:

$$RZ\text{-}CO\text{-}CR^aR^b\text{-}(CR^cR^d)_n\text{-}NH\text{-}(Y)_m\text{-}CO\text{-}A \qquad (I)$$

wherein n is an integer from 1 to 15, m is either 0 or 1; R^a, R^b, R^c, and R^d are each a hydrogen or a hydrocarbyl group; Y is $CO\text{-}(CR^eR^f)_{p,}$ wherein R^e and R^f are each a hydrogen or hydrocarbyl group and p is zero or an integer from 1 to 20 or $CO\text{-}C_6H_4\text{-}$, wherein the substitution pattern on the phenylene group is an ortho, meta, or para substitution pattern and one or more of the hydrogens of the phenylene group may be substituted by a hydrocarbyl group or a functional group; Z is -O- or -NG-, wherein G is H, C_1-C_{12} alkyl or the radical R; and wherein R is

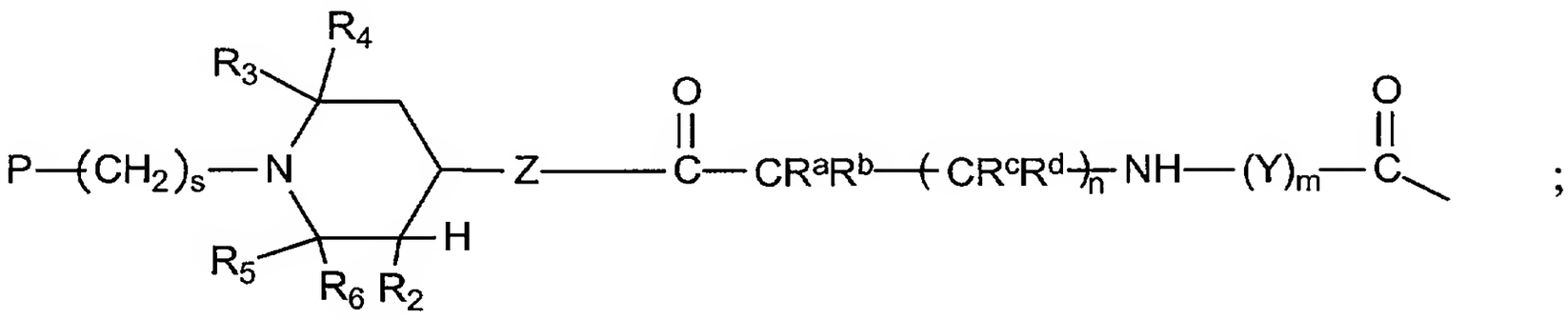


wherein R^1 is hydrogen, C_1-C_{18} alkyl, O, OH, CH_2CN, C_1-C_{18} alkoxy, C_1-C_{18} hydroxyalkoxy, C_5-C_{12} cycloalkoxy, C_5-C_{12} hydrocycloalkoxy, C_3-C_6 alkenyl, C_1-C_{18} alkynyl, C_7-C_9 phenylalkyl, unsubstituted or substituted on the phenyl with 1, 2 or 3 C_1-C_4 alkyls, or an aliphatic C_1-C_8 acyl; R^2 is hydrogen, C_1-C_8 alkyl, or benzyl; R^3, R^4, R^5, and R^6 are each a hydrogen, C_1-C_8 alkyl, benzyl or phenethyl, or two geminal R moieties, which together with the carbon to which they are attached form a C_5-C_{10} cycloalkyl; and A is either ZR or a hydrocarbyl group; the compound of formula II is:



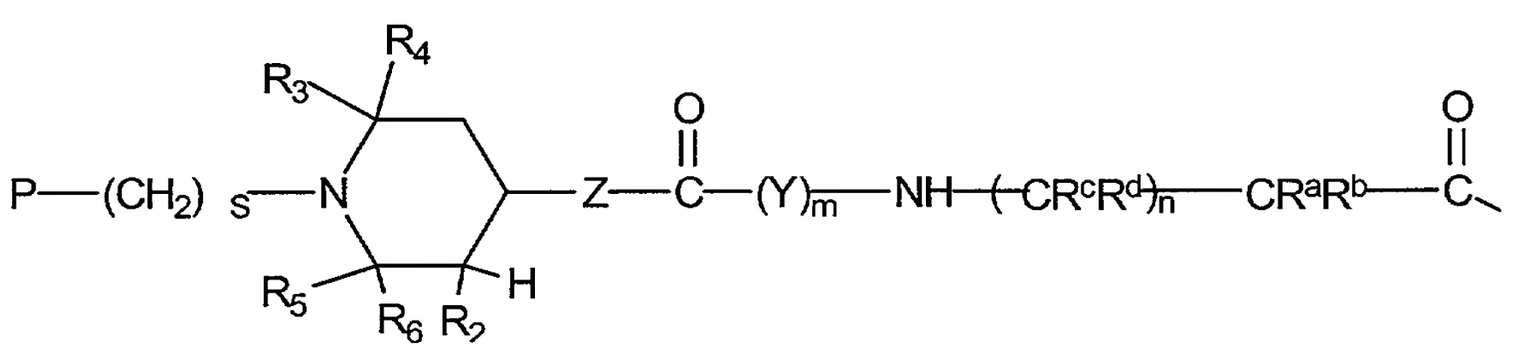
(II)

wherein i, j, k, and l are integers from about 0 to 300 and the sum of i, j, k, and l is greater than 2, wherein E-F is



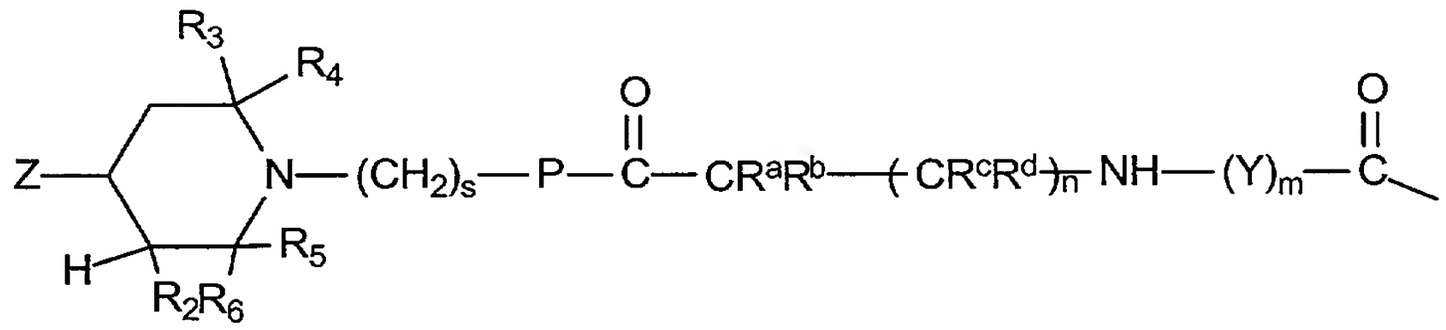
;

E-F' is



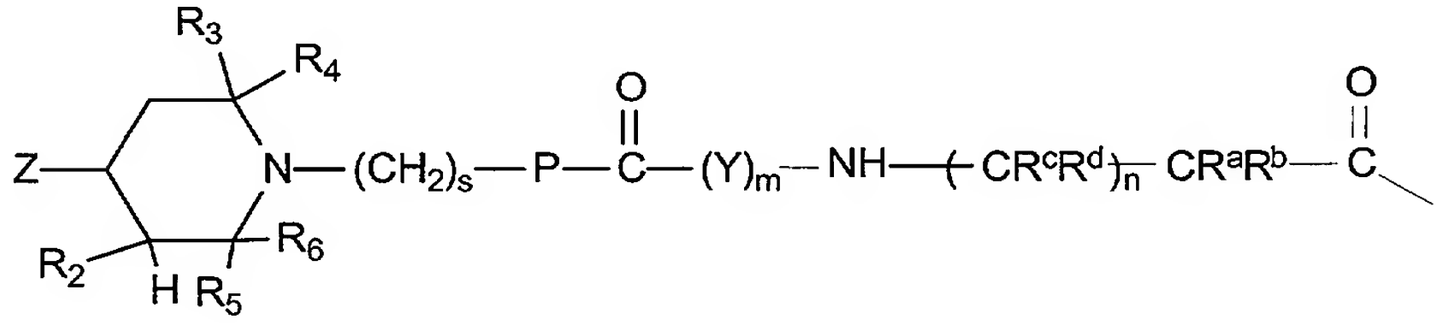
;

E'-F is

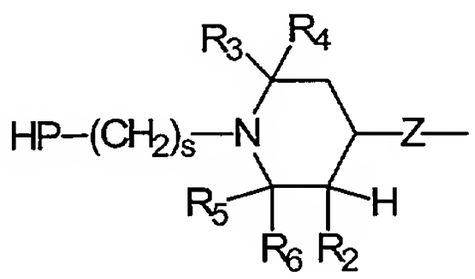


; and

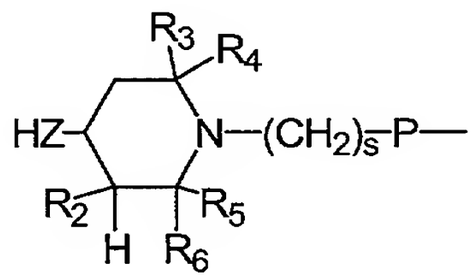
E'-F' is



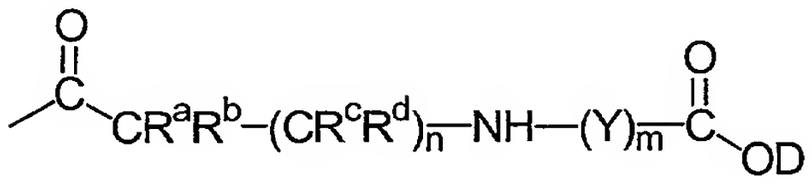
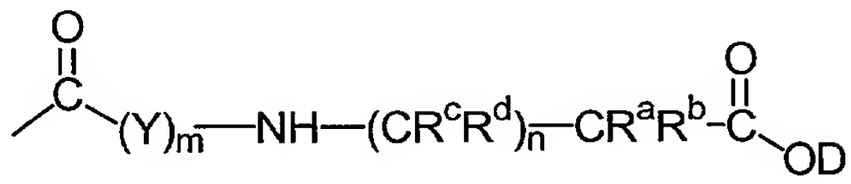
S is a hydrogen, or a unit derived from a piperidin-4-ol or a 4-aminopiperidine moiety having the structure



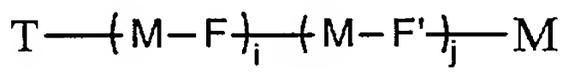
or



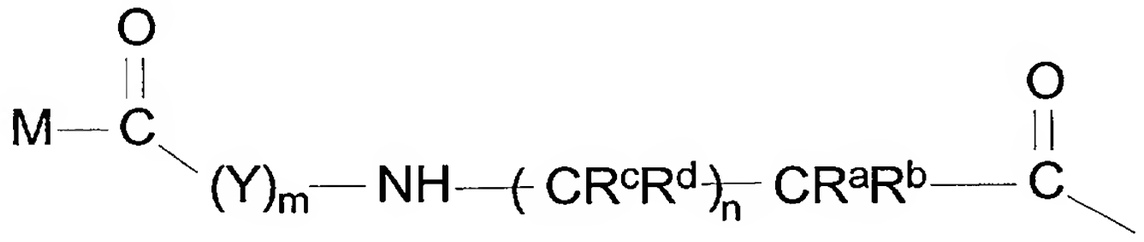
and T is a hydrogen or a unit derived from a multi-functional carbonyl compound having the structure


or


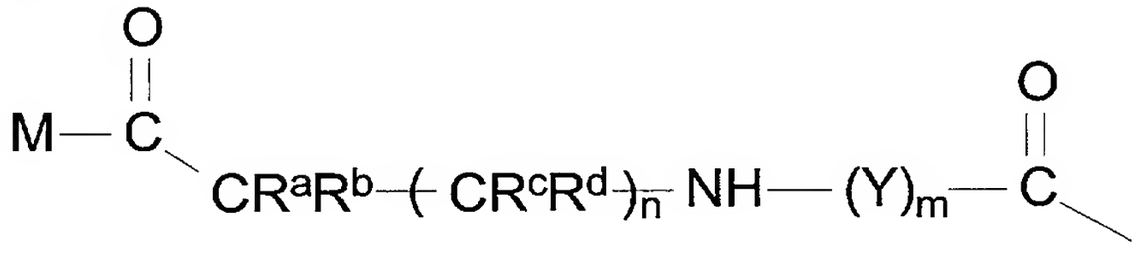
wherein D is a hydrocarbyl group, n is an integer from 1 to 15, m is either 0 or 1, s is 0 or an integer from 1 to 10; R^a, R^b, R^c, and R^d, are each a hydrogen or a hydrocarbyl group; Y is CO-$(CR^eR^f)_p$, wherein R^e and R^f are each a hydrogen or hydrocarbyl group and p is an integer from 0 to 20 or CO-C_6H_4-, wherein the substitution pattern on the phenylene group is an ortho, meta, or para substitution pattern, and one or more of the hydrogens of the phenylene group may be substituted by a hydrocarbyl group or a functional group; R^2 is hydrogen, C_1-C_8 alkyl, or benzyl; R^3, R^4, R^5, and R^6 are each a hydrogen, C_1-C_8 alkyl, benzyl or phenethyl, or two geminal R moieties, which together with the carbon to which they are attached form a C_5-C_{10} cycloalkyl; Z is -O- or NG, wherein G is H or C_1-C_{12} alkyl; and when s is greater than 0, P is NH or O; and when s is 0, P=O or O-L-O, where L is a hydrocarbylene; and the compound of formula III is:


(III)

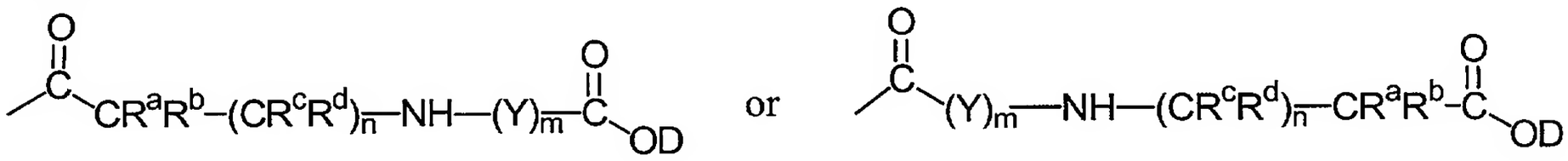
wherein i and j are integers from about 0 to 300 and the sum of i and j is greater than 2, M-F is


;

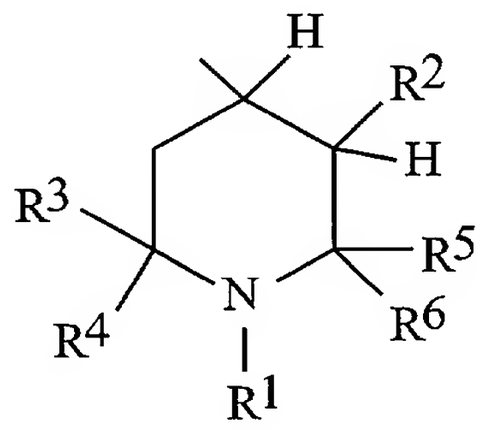
M-F' is:


;

T is a hydrogen or a unit derived from a multi-functional carbonyl compound having the structure



wherein D is a hydrocarbyl group, n is an integer from about 1 to 15, m is either 0 or 1, R^a, R^b, R^c, and R^d, are each a hydrogen or a hydrocarbyl group; Y is CO-$(CR^eR^f)_p$, wherein R^e and R^f are each a hydrogen or hydrocarbyl group and p is an integer from about 0 to 20 or CO-C_6H_4-, wherein the substitution pattern on the phenylene group is an ortho, meta, or para substitution pattern, and one or more of the hydrogens of the phenylene group may be substituted by a hydrocarbyl group or a functional group; and M is one or more diamino or a dihydroxy groups that contains a 4-aminopiperidine radical of general structure



wherein R^1 represents hydrogen, C_1-C_{18} alkyl, O, OH, C_1-C_{18} alkoxy, C_1-C_{18} hydroxyalkoxy, C_5-C_{12} cycloalkoxy, C_5-C_{12} hydroxycycloalkoxy, CH_2CN, C_3-C_6 alkenyl, C_1-C_{18} alkynyl, C_7-C_9 phenylalkyl, unsubstituted or substituted on the phenyl with 1, 2 or 3 C_1-C_4 alkyls, or an aliphatic C_1-C_8 acyl; R^2 is hydrogen, C_1-C_8 alkyl, or benzyl; R^3, R^4, R^5, and R^6 are each a hydrogen, C_1-C_8 alkyl, benzyl or phenethyl, or two geminal R moieties, which together with the carbon to which they are attached, form a C_5-C_{10} cycloalkyl; and M is bonded to the multi-functional carbonyl compound by the hydroxy or amino group of M.

2. The polymeric article of claim 1, wherein the amount of the at least one compound is from about 0.01 to 10 percent by weight of the polymeric article.

3. The polymeric article of claim 1, wherein the polymeric material is selected from the group consisting of polyolefins; polyesters; polyethers; polyketones; polyamides;

natural and synthetic rubbers; polyurethanes; polystyrenes; high-impact polystyrenes; polyacrylates; polymethacrylates; polyacetals; polyacrylonitriles; polybutadienes; polystyrenes; ABS; SAN (styrene acrylonitrile); ASA (acrylate styrene acrylonitrile); cellulosic acetate butyrate; cellulosic polymers; polyimides; polyamideimides; polyetherimides; polyphenylsulfides; PPO; polysulfones; polyethersulfones; polyvinylchlorides; polycarbonates; polyketones; aliphatic polyketones; thermoplastic TPO's; aminoresin crosslinked polyacrylates and polyesters; polyisocyanate crosslinked polyesters and polyacrylates; phenol/formaldehyde, urea/formaldehyde, and melamine/formaldehyde resins; drying and non-drying alkyd resins; alkyd resins; polyester resins; acrylate resins cross-linked with melamine resins, urea resins, isocyanates, isocyanurates, carbamates, and epoxy resins; cross-linked epoxy resins derived from aliphatic, cycloaliphatic, heterocyclic and aromatic glycidyl compounds which are cross-linked with anhydrides or amines; polysiloxanes; Michael addition polymers of amines or blocked amines with activated unsaturated and methylene compounds, ketimines with activated unsaturated and methylene compounds, polyketimines in combination with unsaturated acrylic polyacetoacetate resins, and polyketimines in combination with unsaturated acrylic resins; radiation curable compositions; epoxymelamine resins; organic dyes; cosmetic products; cellulose-based paper formulations; photographic film paper; ink; and blends thereof.

4. The polymeric article of claim 3, wherein the polymeric material comprises a polyamide or a homopolymer or copolymer of a polyolefin.

5. The polymeric article of claim 1, further comprising one or more additives selected from the group consisting of antioxidants, UV absorbers and light stabilizers, metal deactivators, phosphites and phosphonites, hydroxylamines, nitrones, thiosynergists, peroxide scavengers, polyamide stabilizers, basic co-stabilizers, nucleating agents, fillers and reinforcing agents, benzofuranones, indolinones, acid scavengers, antistatic agents, blowing agents, catalysts, clarifying agents, emulsifiers, fillers, flameproofing agents, fluorescent whitening agents, infrared absorbers, leveling assistants, lubricants, metal deactivators, mold release agents, nucleating agents, optical brighteners, pigments, plasticizers, rheological additives, and mixtures thereof.

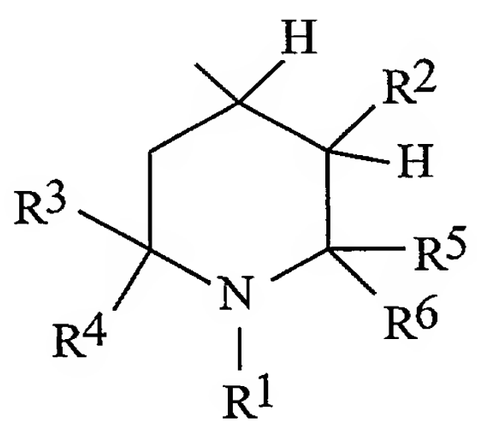
6. The polymeric article of claim 5, wherein the one or more additives is present in an amount of up to about 10 percent by weight of the polymeric article.

7. A composition comprising

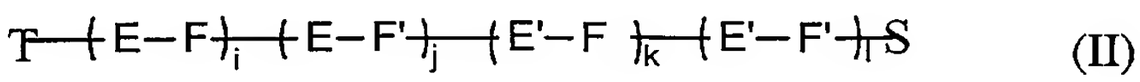
(a) at least one compound of formula I, II, or III wherein the compound of formula (I) is:

$$RZ\text{-}CO\text{-}CR^aR^b\text{-}(\text{-}CR^cR^d\text{-})_n\text{-}NH\text{-}(Y)_m\text{-}CO\text{-}A \qquad (I)$$

wherein n is an integer from 1 to 15, m is either 0 or 1; R^a, R^b, R^c, and R^d are each a hydrogen or a hydrocarbyl group; Y is $CO\text{-}(CR^eR^f)_p$, wherein R^e and R^f are each a hydrogen or hydrocarbyl group and p is zero or an integer from 1 to 20 or $CO\text{-}C_6H_4\text{-}$, wherein the substitution pattern on the phenylene group is an ortho, meta, or para substitution pattern and one or more of the hydrogens of the phenylene group may be substituted by a hydrocarbyl group or a functional group; Z is -O- or -NG-, wherein G is H, C_1-C_{12} alkyl or the radical R; and wherein R is



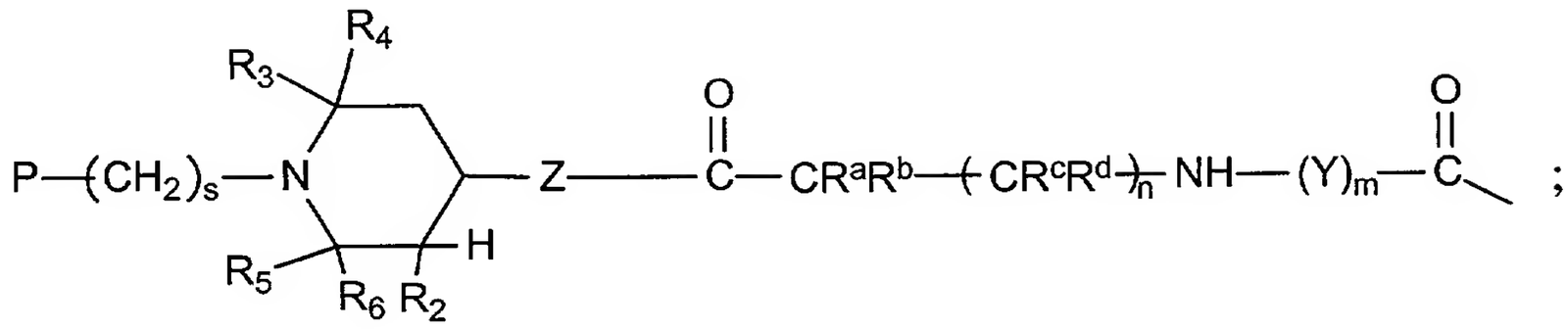
wherein R^1 is hydrogen, C_1-C_{18} alkyl, O, OH, CH_2CN, C_1-C_{18} alkoxy, C_1-C_{18} hydroxyalkoxy, C_5-C_{12} cycloalkoxy, C_5-C_{12} hydroxycycloalkoxy, C_3-C_6 alkenyl, C_1-C_{18} alkynyl, C_7-C_9 phenylalkyl, unsubstituted or substituted on the phenyl with 1, 2 or 3 C_1-C_4 alkyls, or an aliphatic C_1-C_8 acyl; R^2 is hydrogen, C_1-C_8 alkyl, or benzyl; R^3, R^4, R^5, and R^6 are each a hydrogen, C_1-C_8 alkyl, benzyl or phenethyl, or two geminal R moieties, which together with the carbon to which they are attached form a C_5-C_{10} cycloalkyl; and A is either ZR or a hydrocarbyl group; the compound of formula II is:



(II)

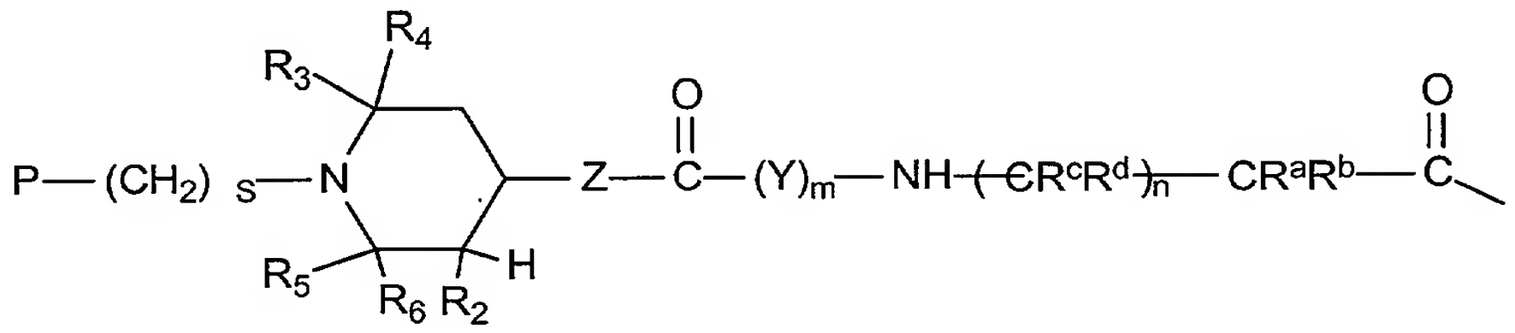
wherein i, j, k, and l are integers from about 0 to 300 and the sum of i, j, k, and l is

greater than 2, wherein E-F is



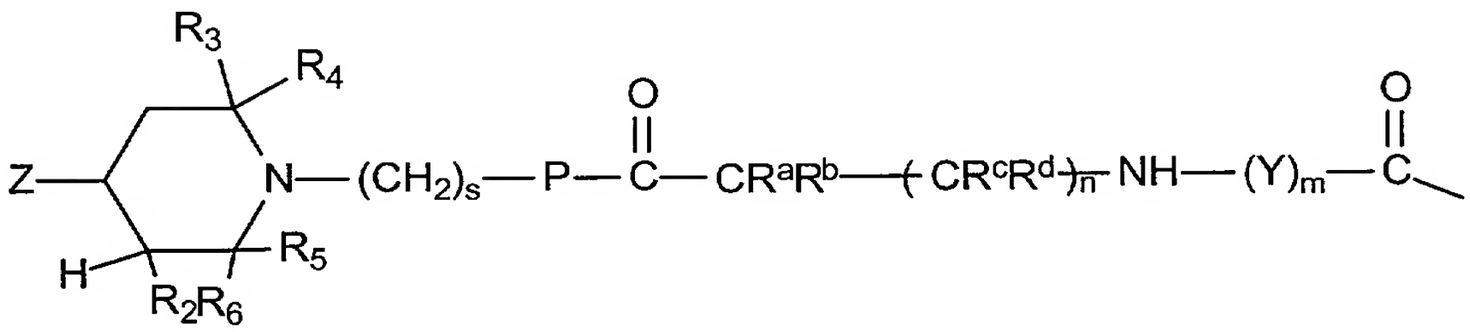
;

E-F' is



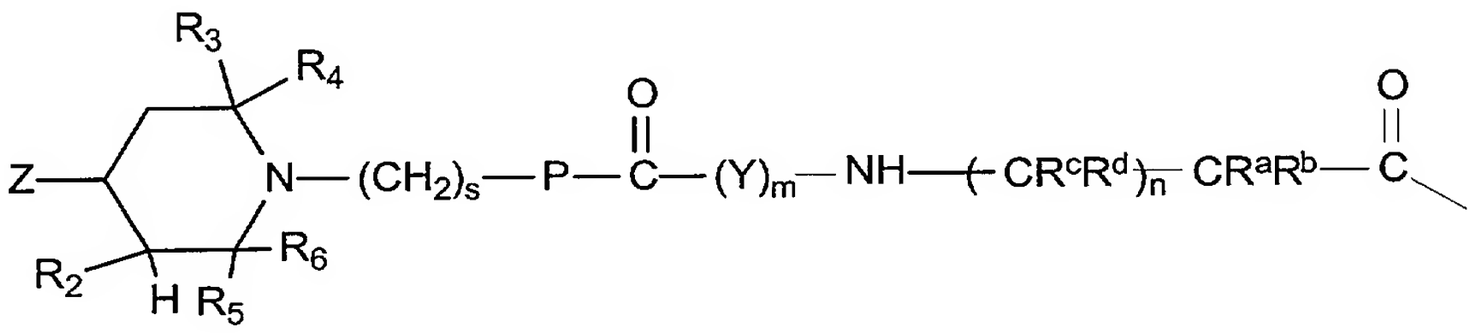
;

E'-F is

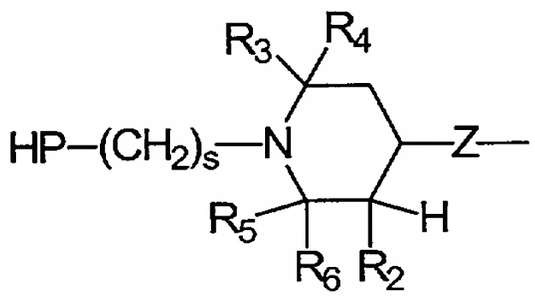


; and

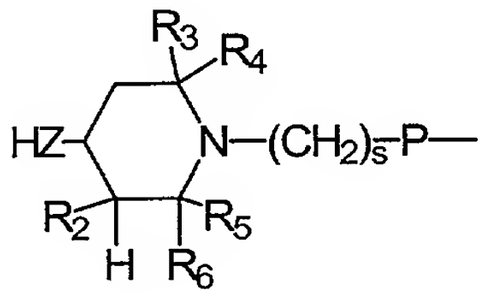
E'-F' is



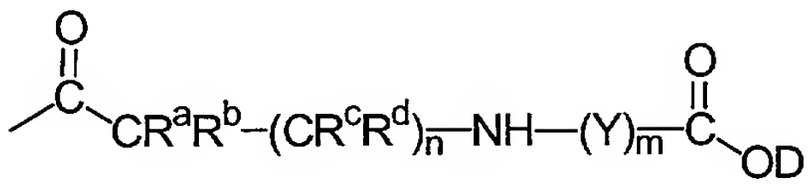
S is a hydrogen, or a unit derived from a piperidin-4-ol or a 4-aminopiperidine moiety having the structure



or



and T is a hydrogen or a unit derived from a multi-functional carbonyl compound having the structure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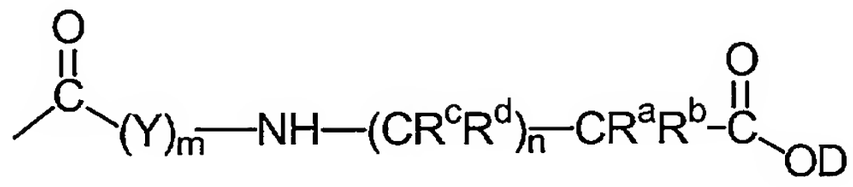
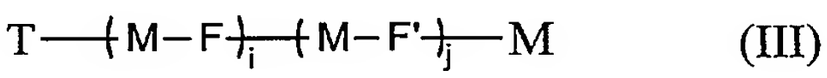
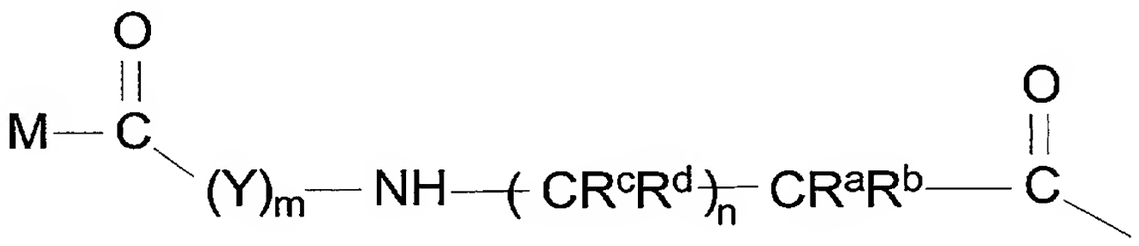


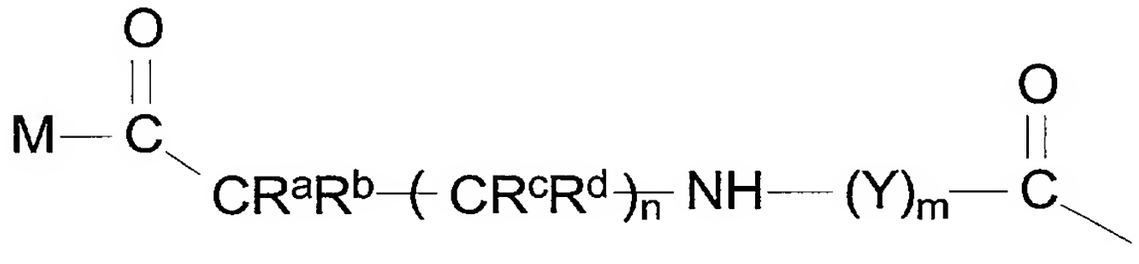
wherein D is a hydrocarbyl group, n is an integer from 1 to 15, m is either 0 or 1, s is 0 or an integer from 1 to 10; R^a, R^b, R^c, and R^d, are each a hydrogen or a hydrocarbyl group; Y is CO-$(CR^eR^f)_p$, wherein R^e and R^f are each a hydrogen or hydrocarbyl group and p is an integer from 0 to 20 or CO-C_6H_4-, wherein the substitution pattern on the phenylene group is an ortho, meta, or para substitution pattern, and one or more of the hydrogens of the phenylene group may be substituted by a hydrocarbyl group or a functional group; R^2 is hydrogen, C_1-C_8 alkyl, or benzyl; R^3, R^4, R^5, and R^6 are each a hydrogen, C_1-C_8 alkyl, benzyl or phenethyl, or two geminal R moieties, which together with the carbon to which they are attached form a C_5-C_{10} cycloalkyl; Z is -O- or NG, wherein G is H or C_1-C_{12} alkyl; and when s is greater than 0, P is NH or O; and when s is 0, P=O or O-L-O, where L is a hydrocarbylene; and the compound of formula III is:


(III)

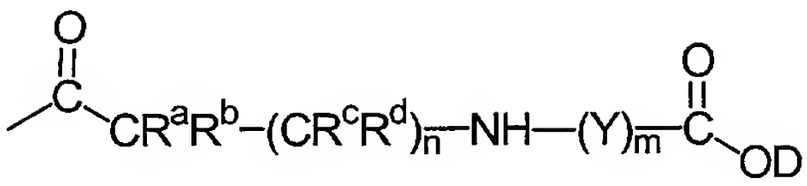
wherein i and j are integers from about 0 to 300 and the sum of i and j is greater than 2, M-F is


;

M-F' is:


;

T is a hydrogen or a unit derived from a multi-functional carbonyl compound having the structure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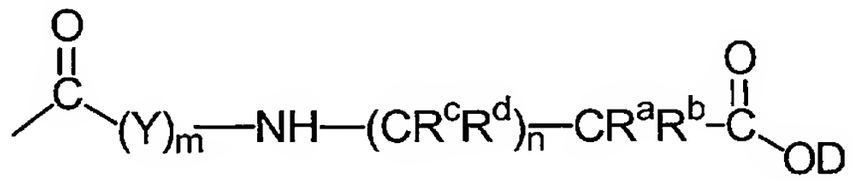
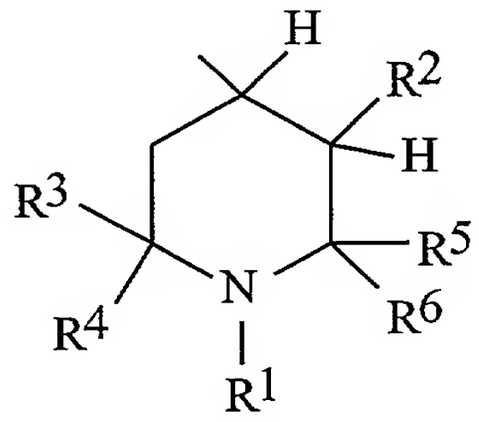


wherein D is a hydrocarbyl group, n is an integer from about 1 to 15, m is either 0 or 1, R^a, R^b, R^c, and R^d, are each a hydrogen or a hydrocarbyl group; Y is CO-$(CR^eR^f)_p$, wherein R^e and R^f are each a hydrogen or hydrocarbyl group and p is an integer from about 0 to 20 or CO-C_6H_4-, wherein the substitution pattern on the phenylene group is an ortho, meta, or para substitution pattern, and one or more of the hydrogens of the phenylene group may be substituted by a hydrocarbyl group or a functional group; and M is one or more diamino or a dihydroxy groups that contains a 4-aminopiperidine radical of general structure



wherein R^1 represents hydrogen, C_1-C_{18} alkyl, O, OH, C_1-C_{18} alkoxy, C_1-C_{18} hydroxyalkoxy, C_5-C_{12} cycloalkoxy, C_5-C_{12} hydroxycycloalkoxy, CH_2CN, C_3-C_6 alkenyl, C_1-C_{18} alkynyl, C_7-C_9 phenylalkyl, unsubstituted or substituted on the phenyl with 1, 2 or 3 C_1-C_4 alkyls, or an aliphatic C_1-C_8 acyl; R^2 is hydrogen, C_1-C_8 alkyl, or benzyl; R^3, R^4, R^5, and R^6 are each a hydrogen, C_1-C_8 alkyl, benzyl or phenethyl, or two geminal R moieties, which together with the carbon to which they are attached, form a C_5-C_{10} cycloalkyl; and M is bonded to the multi-functional carbonyl compound by the hydroxy or amino group of M.

(b) at least one other additive selected from the group consisting of: UV-absorbers and light stabilizers, and antioxidants.

8. The composition of claim 7 wherein said at least one other additive is selected from the group consisting of 2-(2'-hydroxyphenyl)benzotriazoles, oxamides, 2-(2-hydroxphenyl)-1,3,5-triazines, 2-hydroxybenzophenones, sterically hindered amines and hindered phenol antioxidants.

9. The composition of claim 7 wherein said at least one additive is selected from the group consisting of: 2-(2'-hydroxy-5'-methylphenyl)-benzotriazole;
2-(3',5'-di-tert-butyl-2'-hydroxyphenyl)benzotriazole;
2-(5'-tert-butyl-2'-hydroxyphenyl)benzotriazole;
2-(2'-hydroxy-5'-(1,1,3,3-tetramethylbutyl)phenyl)benzotriazole;
2-(3',5'-di-tert-butyl-2'-hydroxyphenyl)-5-chlorobenzotriazole;
2-(3'-tert-butyl-2'-hydroxy-5'-methylphenyl)-5-chloro-benzotriazole;
2-(3'-sec-butyl-5'-tert-butyl-2'-hydroxyphenyl)-benzotriazole;
2-(2'-hydroxy-4'-octoxyphenyl)benzotriazole;
2-(3',5'-di-tert-amyl-2'-hydroxphenyl)benzotriazole;
2-(3',5'-bis(a,a-dimethylbenzyl)-2'-hydroxyphenyl)-benzotriazole; a mixture of
2-(3'-tert-butyl-2'-hydroxy-5'-(2-octyloxycarbonylethyl)phenyl)-5-chloro-benzotriazole,
2-(3'-tert-butyl-5'-[2-(2-ethylhexyloxy)-carbonylethyl]-2'-hydroxyphenyl)-5-chloro-benzotriazole,
2-(3'-tert-butyl-2'-hydroxy-5'-(2-methoxycarbonylethyl)phenyl)-5-chloro-benzotriazole,
2-(3'-tert-butyl-2'-hydroxy-5'-(2-methoxycarbonylethyl)phenyl)benzotriazole,
2-(3'-tert-butyl-2'-hydroxy-5'-(2-octyloxycarbonylethyl)phenyl)benzotriazole,
2-(3'-tert-butyl-5'-[2-(2-ethylhexyloxy)carbonylethyl]-2'-hydroxyphenyl)benzotriazole,
2-(3'-dodecyl-2'-hydroxy-5'-methylphenyl)benzotriazole and
2-(3'-tert-butyl-2'-hydroxy-5'-(2-isooctyloxycarbonylethyl)phenylbenzotriazole;
2,2-methylenebis[4-(1,1,3,3-tetramethylbutyl)-6-benzotriazol-2-ylphenol], the transesterification product of
2-[3'-tert-butyl-5'-(2-methoxycarbonylethyl)-2'-hydroxyphenyl]benzotriazole with polyethylene glycol 300; [R-CH2CH-COO(CH2)3]2 B where R =
3'-tert-butyl-4'-hydroxy-5'-2H-benzotriazol-2-ylphenyl;
bis(2,2,6,6-tetramethylpiperidin-4-yl) sebacate;
bis(2,2,6,6-tetramethylpiperidin-4-yl)succinate;

bis(1,2,2,6,6-pentamethylpiperidin-4-yl)sebacate;
bis(1-octyloxy-2,2,6,6-tetramethylpiperidin-4-yl)sebacate;
bis(1,2,2,6,6-pentamethylpiperidin-4-yl) n-butyl
3,5-di-tert-butyl-4-hydroxybenzylmalonate; the condensate of
1-(2-hydroxyethyl)-2,2,6,6-tetramethyl-4-hydroxypiperidine and succinic acid; the
condensate of N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and
4-tert-octylamino-2,6-dichloro-1,3,5-triazine; tris(2,2,6,6-tetramethylpiperidin-4-yl)
nitrilotriacetate; tetrakis(2,2,6,6-tetramethylpiperidin-4-yl)- 1,2,3,4-butanetetracarboxylate;
1,1'-(1,2-ethanediyl)bis(3,3,5,5-tetramethylpiperazinone);
4-benzoyl-2,2,6,6-tetramethylpiperidine; 4-stearyloxy-2,2,6,6-tetramethylpiperidine;
bis(1,2,2,6,6-pentamethylpiperidyl)-2-n-butyl-2-(2-hydroxy-3,5-di-tert-butylbenzyl)
malonate; 3-n-octyl-7,7,9,9-tetramethyl-1,3,8-triazaspiro[4.5]decan-2,4-dione;
bis(1-octyloxy-2,2,6,6-tetramethylpiperidyl)sebacate;
bis(1-octyloxy-2,2,6,6-tetramethylpiperidyl)succinate; the condensate of
N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and
4-morpholino-2,6-dichloro-1,3,5-triazine; the condensate of
2-chloro-4,6-bis(4-n-butylamino-2,2,6,6-tetramethylpiperidyl)-1,3,5-triazine and
1,2-bis(3-aminopropylamino)ethane; the condensate of
2-chloro-4,6-bis(4-n-butylamino-1,2,2,6,6-pentamethylpiperidyl)-1,3,5-triazine and
1,2-bis-(3- aminopropylamino)ethane;
8-acetyl-3-dodecyl-7,7,9,9-tetramethyl-1,3,8-triazaspiro[4.5]decane-2,4-dione;
3-dodecyl-1-(2,2,6,6-tetramethylpiperidin-4-yl)pyrrolidin-2,5-dione;
3-dodecyl-1-(1-ethanoyl-2,2,6,6-tetramethylpiperidin-4-yl)pyrrolidin-2,5-dione;
3-dodecyl-1-(1,2,2,6,6-pentamethylpiperidin-4-yl)pyrrolidine-2,5-dione; a mixture of
4-hexadecyloxy- and 4-stearyloxy-2,2,6,6-tetramethylpiperidine; the condensate of
N,N'-bis(2,2,6,6-tetramethylpiperidin-4-yl)hexamethylenediamine and
4-cyclohexylamino-2,6-dichloro-1,3,5-triazine; the condensate of
1,2-bis(3-aminopropylamino)ethane, 2,4,6-trichloro-1,3,5-triazine and
4-butylamino-2,2,6,6-tetramethylpiperidine;
2-undecyl-7,7,9,9-tetramethyl-1-oxa-3,8-diaza-4-oxospiro[4.5]decane;
oxo-piperanzinyl-triazines and the reaction product of
7,7,9,9-tetramethyl-2-cycloundecyl-1-oxa-3,8-diaza-4-oxospiro[4.5]decane and

epichlorohydrin;

2,4,6-tris(2-hydroxy-4-octyloxyphenyl)-1,3,5-triazine;

2-(2-hydroxy-4-n-octyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine;

2-(2-hydroxy-4-(mixed iso-octyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine;

2-(2,4-dihydroxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine;

2,4-bis(2-hydroxy-4-propyloxyphenyl)-6-(2,4-dimethylphenyl)-1,3,5-triazine;

2-(2-hydroxy-4-octyloxyphenyl)-4,6-bis(4-methylphenyl)-1,3,5-triazine;

2-(2-hydroxy-4-dodecyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine;

2-(2-hydroxy-4-tridecyloxyphenyl)-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine;

2-[2-hydroxy-4-(2-hydroxy-3-butyloxypropyloxy)phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine;

2-[2-hydroxy-4-(2-hydroxy-3-octyloxypropyloxy)-phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine; 2-[4-dodecyloxy/tridecyloxy-2-hydroxypropoxy)-2-hydroxyphenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine;

2-[2-hydroxy-4-(2-hydroxy-3-dodecyloxypropoxy)phenyl]-4,6-bis(2,4-dimethylphenyl)-1,3,5-triazine;

2-(2-hydroxy-4-hexyloxy)phenyl-4,6-diphenyl-1,3,5-triazine;

2-(2-hydroxy-4-methoxyphenyl)-4,6-diphenyl-1,3,5-triazine;

2,4,6-tris[2-hydroxy-4-(3-butoxy-2-hydroxypropoxy)phenyl]-1,3,5-triazine;

2-(2-hydroxyphenyl)-4-(4-methoxyphenyl)-6-phenyl-1,3,5-triazine,

2,4-dihydroxybenzophenone; 2-hydroxy-4-methoxybenzophenone;

2-hydroxy-4-octyloxybenzophenone; 2-hydroxy-4-decyloxybenzophenone;

2-hydroxy-4-dodecyloxybenzophenone; 2-hydroxy-4-benzyloxybenzophenone,

4,2',4-trishydroxybenzophenone; 2'-hydroxy-4,4'-dimethoxybenzophenone;

1,3,5-tris(2,6-dimethyl-4-tert-butyl-3hydroxybenzyl)isocyanurate;

1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)isocyanurate;

1,3,5-tris(3,5-di-tert-butyl-4-hydroxybenzyl)-2,4,6-trimethylbenzene;

2,6-di-tert-butyl-4-methylphenol; 2,2'-ethylidene-bis(4,6-di-tert-butylphenol);

1,1,3-tris(5-tert-butyl-4-hydroxy-2-methylphenyl)butane; esters of

b-(3,5-di-tert-butyl-4-hydroxyphenyl)propionic acid with mono- or polyhydric alcohols;

esters of b-(5-tert-butyl-4-hydroxy-3-methylphenyl)propionic acid with mono- or polyhydric alcohols; dimethyl-2,5-di-tert-butyl-4-hydroxybenzylphosphonate;

diethyl-3,5-di-tert-butyl-4-hydroxybenzylphosphonate;
dioctadecyl-3,5-di-tert-butyl-4-hydroxybenzylphosphonate;
dioctadecyl-5-tert-butyl-4-hydroxy-3-methylbenzylphosphonate; and the calcium salt of the monoethyl ester of 3,5-di-tert-butyl-4-hydroxybenzylphosphonic acid; amides of b-(3,5-di-tert-butyl-4-hydroxyphenyl)propionic acid such as N,N'-bis(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)hexamethylenediamine; N,N'-bis(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)trimethylenediamine; and N,N'-bis(3,5-di-tert-butyl-4-hydroxyphenylpropionyl)hydrazine.

10. The composition of claim 9 wherein said at least one compond is the compound of formula I.

11. The composition of claim 9 wherein said at least one compound is the compound of formula II.

12. The composition of claim 9 wherein said at least one compound is the compound of formula III.

13. The composition of claim 7 further comprising a material to be stabilized, said material selected from the group consisting of: polyolefins, polyesters, polyethers, polyketones, polyamides, natural and synthetic rubbers, polyurethanes, polystyrenes, high-impact polystyrenes, polyacrylates, polymethacrylates, polyacetals, polyacrylonitriles, polybutadienes, polystyrenes, ABS, styrene acrylonitrile, acrylate styrene acrylonitrile, cellulosic acetate butyrate, cellulosic polymers, polyimides, polyamideimides, polyetherimides, polyphenylsulfides, polyphenylene oxide, polysulfones, polyethersulfones, polyvinylchlorides, polycarbonates, polyketones, aliphatic polyketones, thermoplastic TPO's, aminoresin crosslinked polyacrylates and polyesters, polyisocyanate crosslinked polyesters and polyacrylates, phenol/formaldehyde, urea/formaldehyde and melamine/formaldehyde resins, drying and non-drying alkyd resins, alkyd resins, polyester resins, acrylate resins cross-linked with melamine resins, urea resins, isocyanates, isocyanurates, carbamates, epoxy resins, cross-linked epoxy resins derived from aliphatic, cycloaliphatic, heterocyclic and aromatic glycidyl compounds, which are cross-linked with

anhydrides or amines, polysiloxanes, Michael addition polymers, amines, blocked amines with activated unsaturated and methylene compounds, ketimines with activated unsaturated and methylene compounds, polyketimines in combination with unsaturated acrylic polyacetoacetate resins, polyketimines in combination with unsaturated acrylic resins, radiation curable compositions, epoxymelamine resins, organic dyes, cosmetic products, cellulose-based paper formulations, photographic film paper, ink, and mixtures thereof.